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I hereby certify that annexed is a true copy of the Provisional Specification as filed on 18 January 2002 with an application for Letters Patent number 516708 made by STEPHEN JAMES GARLICK and MICHAEL JOHN GARLICK and PATRICK JOSEPH SCAHILL and JOHN ANTHONY DOWSETT.

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PROVISIONAL SPECIFICATION

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Title: IMPROVEMENTS RELATING TO FURNITURE

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Address: ***2 Protea Street, Maungaraki, Lower Hutt, New Zealand, 11a Byron Street, Upper Hutt, New Zealand and 6 Arapaw Place, Cambourne, Wellington, New Zealand, respectively,*** do hereby declare this invention to be described in the following statement :

IMPROVEMENTS RELATING TO FURNITURE

Field of Invention & Background

This invention relates to furniture and clothing support/hanging arrangements and is particularly applicable to, but not confined to, seating arrangements for such as meetings, convention assemblies, seminars and the like and the problems faced by attendees in finding a convenient place to hang such as a jacket.

10

It is commonplace for attendees to arrive at such as business meetings/gatherings formally or semi-formally dressed with a jacket, and at some stage after arrival they will wish to remove their jackets for comfort and often because of becoming overly warm in heated meeting rooms; whilst at the same time they wish to keep their jackets close by for security and quick access to pocket contents etc, and in case required to be placed back on with cooling temperatures - it is a well known source of discomfort to find significant temperature fluctuations in such as large hotel meeting and convention centre rooms, due to the varying operation of air conditioning systems for large areas. Typically an attendee will (or will endeavour to) hang his or her jacket over his/her seat backrest, but this can be a problem in many instances and usually has a number of disadvantages, including for example:

- a. a problem in keeping the jacket in place on a backrest having rounded upper edge parts;
- b. collar and label rumpling and/or jacket dislodgement with back pressure from and movement by the seated person;
- c. the lower edge parts of the jacket resting on or brushing the floor and becoming dirtied, particularly when the jacket is simply hooked from the neck or collar part at one corner of or a projection on the backrest; and

d. distortion and possible damage to the jacket by improper support and non-conforming shape of the seat backrest upper edge parts, particularly with back pressure and movement as aforesaid.

5

Objects of the Invention

An object of the invention is provide a means for overcoming the aforementioned problems and disadvantages arising from use of conventional seat backrests to temporarily support a garment such as a jacket of a meeting attendee; and to provide a convenient and effective garment support means whereby a jacket or like garment can be positively and safely hung in a manner guarding against accidental lodgement and in a manner providing against distortion of the garment shape.

The invention is not of course limited to use for the support of the jacket of an attendee at a meeting, and it is another object of the invention to provide a combination seat backrest and garment support hanger assembly that may be very usefully applicable in the furnishing of such as a small room (eg a small hotel or other bedroom, bed-sitter accommodation, a study or home office) where wardrobe and garment hanging space may be at a premium, and in such as commercial office situations and in restaurants or the like.

Other and more particular objects and advantages of the invention will become apparent from the ensuing description.

Summary of Invention

In a first aspect the invention may be said to broadly comprise a coat or like garment support hanger assembly fitted or arranged for fitment to a seat backrest and having a garment support part movable between a first stowed non-usable position within or in close proximity

to the rear part of a seat backrest, and a second usable position projecting from the seat backrest for support of a coat or like garment.

5 In a second aspect of the invention there is provided a seat backrest assembly arranged for fitment to a rear upper support part of a seat, said backrest assembly having an upright forward side against which a users back can rest when seated, and a rear side
10 incorporating or provided with a coat or like garment support hanger mounted for movement between a first inner stowed and/or non-usable position and a second projecting position enabling a garment to be located and supported thereon.

15

The support hanger is shaped to provide good form fitting support across and between the shoulder parts of a garment such as a jacket, for maintenance of the garment shape whilst supported thereon, and in one
20 preferred form thus comprises a medial support part with an upper projecting shaped neck portion and opposite laterally projecting wing parts merging therewith and defining garment shoulder support parts.

A simpler lower cost version may omit the shaped neck
25 portion.

Preferably the seat backrest is recessed on its rear side to enable location of said garment support hanger within such backrest recess when in the first stowed non-usable position; but in the alternative and again
30 providing a lower cost version, the garment support hanger and mounting arrangement therefor may provide that in the stowed position the support hanger lies in juxtaposition with the rear side of the seat backrest.

35

Preferably also said garment support hanger locates in raised projecting relationship with the backrest

when in the second position for support of a jacket or like garment in an elevated position with the lower edge portions of the garment clear of the floor on which the seat is located.

5

The invention includes a garment support hanger assembly adapted for fitment to a backrest of an existing seat or chair; a combination backrest fitted with or incorporating a garment support hanger assembly, the
10 assembly as a whole being adapted and arranged as a replacement assembly for the conventional backrest of an existing seat or chair; and a complete seat unit or chair incorporating the combination garment support hanger assembly and seat backrest.

15

Preferably the constructions in accordance with the invention include releasable retaining means for holding the garment support hanger assembly securely in said first stowed and second usable positions.

20

Other aspects of the invention are outlined in the following description.

Brief Description of Drawings

25 Some preferred forms or aspects of the invention will now be described by way of example and with reference to the accompanying drawings, in which:

FIGURE 1 is a rear perspective view of one preferred form of combination chair or seat back and garment
30 support hanger assembly, shown in the first stored position;

FIGURE 2 is a rear perspective view of the assembly similar to figure 1 but illustrating the garment support
35 hanger in the second elevated and projecting position ready for use;

FIGURE 3 is a front perspective view of the seat or chair with garment support hanger in the second elevated and projecting position;

5 FIGURE 4 is a perspective view from the lower rear side of the backrest and garment support hanger assembly, removed from the seat or chair as shown in the second projecting position;

10 FIGURE 5 is a sectional side view more particularly illustrating the construction and operation of the combination seat backrest and garment support hanger assembly

15 FIGURE 6 is a rear perspective view illustrating one example of an alternative simpler form of independantly constructed garment hanger assembly fitted to a typical existing seat backrest which is shown only in part; and

20

FIGURES 7 & 8 are rear and side part broken views more particularly illustrating the construction and operation of the garment hanger support and mounting parts.

25 Description of Invention

In the first preferred form of the invention and as illustrated in figures 1 to 5 inclusive, the seat or chair backrest 1 has a recess 2 on the rear side and conforming in depth and shape to the thickness and
30 shape of the garment support hanger part, generally indicated by the arrow 3; of the assembly; to thus enable the full stored or stowed location of the support hanger part 3 within such recess 2 when in the first position not required for use in supporting a jacket
35 or like garment. The rear surface of the support hanger part 3 is preferably contoured to suit and arranged to lie flush with, or substantially so, the main rear

surface of the seat backrest 1 surrounding the recess 2; so that the support hanger part 3 is unobtrusive when in the first stored position and the aesthetic lines of the seat or chair as a whole are unaffected.

5 This arrangement of backrest 1 and recessed garment support hanger 3 provision is also particularly advantageous for application to stackable chair units, as are commonly preferred for use in such as meeting rooms and restaurants or like places where large and

10 varying numbers of people are required to be accommodated and the chairs are required to be frequently relocated and/or stored when not in use.

The seat backrest 1 to which the invention applies

15 or can be applied can be of any convenient or required shape and be constructed from any suitable conventionally used material or combination of materials applicable to chair manufacture. As indicated the invention has a particularly useful application to

20 stackable chairs for use in meeting rooms, restaurants and the like and the accompanying drawing example such a chair with a slim rounded backrest 1 which may be conveniently formed as a recessed solid article from such as by moulding from a suitable rigid and

25 aesthetically pleasing and pre-coloured plastics material, and the support hanger part 3 similarly formed by moulding from the same plastics material. Alternatively the rear surface part of the backrest can be formed such as by stamping and pressing into

30 the desired shape and recessed form from such as a sheet metal or strong rigid sheet plastics material; and the backrest 1 completed with an overlying hard front pad or cushioned front pad or covering. The latter construction can thus enable the application

35 of the invention to other than stackable chair units and for example enable application to larger and/or more luxurious executive office and custom built chairs, or chairs more suited to hotel bedroom or sitting rooms

and uses other than meeting room use. The combination seat backrest 1 and garment support hanger 3 assemblies can be formed in a variety of peripheral shapes and sizes so as to be employed in the manufacture of new
5 chairs or provided separately as alternative or replacement backrest components for currently manufactured and available stackable and/or non-stackable chairs having separately formed detachable backrest components.

10

The support hanger part 3 is in the present instance of generally cruciform shape with an upper section having a form substantially similar to a good quality coat hanger, with a medial upper neck or collar portion
15 4 merging into opposite laterally projecting wing portions 5 for receiving and supporting the shoulder portions of a jacket or like garment (not shown); and with a lower or depending medial support portion 6, preferably integrally formed therewith in a plastics
20 moulded construction. In an alternative fabricated construction the medial support depending portion 6 can be of fabricated sheet metal or metal tube or bar form, and on the upper part of which the hanger portion 4,5 is mounted.

25

The medial/upper rear surface part of the support hanger part 3 is preferably provided with a finger grip recess
7 to facilitate movement between the first stored and second usable positions, particularly for the preferred
30 arrangement with the support hanger part 3 snugly fitting in the provided recess 2 and requiring to be pulled outwardly and upwardly relative thereto; and the support hanger part 3 can be mounted for pivoting movement in a vertical plane between the two positions
35 such as by the provision of a pair of upper and lower support arms or link members 8 and 9 medially positioned in alignment one above the other and hingeably connected between the forward side of the support hanger part

3 and the outer rear face of the base 2a of the recess 2. In the illustrated arrangement shown more particularly in figures 4 and 5 of the drawings, the two link members 8 and 9 are of similar flat metal strap form each having their opposite end parts provided with a hinge connection (8a, 8b and 9a, 9b) defining a horizontal pivot axis; so that a parallel or substantially parallel linkage arrangement is provided and enables the support hanger part 3 to be suspended in the first stored position within the recess 2 and with the link members 8,9 depending from their inner hinge connections 8b,9b with the recess base 2a and lying substantially flat between the recess base 2a and the support hanger part 3. A user can then take hold of the rear finger grip recess 7 and pull the support hanger part 3 rearwardly outwardly and then upwardly towards the elevated upwardly projecting second position; and on reaching the upper maximum travel permitted by the parallel linkage (link members 8,9), a slight inward or forward movement of the lower end part of the support hanger part 3 to incline such part 3 will take the hinge connection 9a of the lower link member 9 'over-centre' of the parallel link movement to enable the lower end of the support arm portion 6 to abut the recess base 2a, with the lower strap link 9 extending upwardly from hinge connection 9b and lying flat against the recess base 2a to hold the support hanger part 3 against dropping downwardly from the second position, the upper strap link 8 remaining rearwardly and upwardly inclined to serve as a tie for holding the upper portion 4,5 of the support hanger part 3 in the garment supporting second position. The lower link member 9 can be assisted in remaining in the indicated upwardly extending support position by any suitable releasable catch means; and in one arrangement a magnetic catch means is provided with a magnet 10 inserted in a medial recess in the recess base 2a and strategically positioned to align with

and be engaged by the metal lower link member 9 when in the second support position. The same magnet 10 can be dual purpose and also positioned for magnetic engagement by the upper metal link member 8, or
5 alternatively a second alignable magnet 10a inserted medially of the hanger support 3, when the support hanger part 3 is no longer required to be used and is returned by downward hinging movement to the first stored or stowed position locating in the backrest recess
10 2, with the link members 8 and 9 depending from their inner hinge connections 8b, 9b and lying flat against the recess base 2a; the support hanger part 3 being thus released held in the stowed position against outward movement as may be otherwise occur with chair
15 movement, and gravitational forces in the case of the backrest 3 being inclined rearwardly as is usually preferred. Other releasable catch means can of course be provided, but the aforementioned single magnet catch means is a simple effective and economic arrangement.

20

To assist in providing a slim line construction the hanger part 3 is preferably provided with a vertically disposed longitudinal medial slot(s) or recess(es)
11 of a width enabling clearance fit of the upper and
25 lower link members 8,9 therein when the hanger part 3 locates in the first stored position - the outer hinge connections 8a and 9a being fitted within such slot(s) or recess(es) 11.

30 Other means for mounting and supporting the support hanger part 3 for movement between the first stored and second usable positions can be provided; and it is envisaged for example that where elevation of the support hanger part 3 is not necessary for floor
35 clearance by a supported jacket or like garment (eg as in the case of a high backed chair), the lower support part 6 and connecting parallel link members 8,9 can be dispensed with and the support hanger part

3 can have a substantially straight lower edge portion which is directly hingedly connected to the backrest, so that the upper part incorporating the neck/collar 4 and shoulder wing portions 5 is simply pulled 5 outwardly or rearwardly from the first stored/stowed position to the second usable position. Restricted movement hinge means and/or an upper flexible or hinged tie member extending between the backrest recess base 2a and inner forward side of the support hanger part 10 3, can be provided to hold the hanger part 3 in the stored or stowed position within its recess 2.

A further alternative arrangement providing for an elevated second position envisages mounting of the 15 upper part 4,5 of the hanger part 3 on a medial depending rod or bar which is slidably located in a supporting guide part mounted on or incorporated in the backrest 1; thus enabling the hanger part 3 to be slid upwardly or downwardly between the two 20 positions. Two spaced depending rod or bar supports and mating supporting guide parts can be alternatively provided.

For non-stackable existing chair constructions and/or 25 where the constructions do not conveniently permit detachment of the existing backrest and replacement by a combination backrest and garment support in accordance with the invention; it is envisaged that the combination assembly of the invention can be 30 arranged for fitment such as by screws to the existing chair backrest. Also, where the invention is applied to such as a hotel or other bedroom chair and clothes hanging space is at a premium, the rear lower side of the garment support hanger part 3 can be provided 35 with such as a trouser hanger bar and/or hook or clip means for skirt or trouser support.

Referring now to figures 6,7 and 8 of the drawings,

in one alternative form of the invention there is provided an independently constructed garment support hanger unit (generally indicated by the arrow 12) which can be factory fitted to the backrest parts of complete
5 new chairs or to new replacement chair backs intended for fitment to existing chairs, or which can be sold independently for retro-fitment to the existing backrest parts of existing chairs.

10 The hanger unit 12 includes a strong base mounting 13 which in this instance comprises a squared mounting plate 13a provided with clearance holes 14 for receiving mounting screws bolts or like fasteners and securing the unit 12 to the medial lower rear part of a chair
15 backrest 15; and a pair of spaced vertical flange parts 16 which project rearwardly from the mounting plate 13a to have a hanger support arm 17 project upwardly from a lower end pivotal connection 18 with the flange parts 16. The support arm being movable about a
20 horizontal pivot axis 18a parallel with the mounting plate 13a and associated portion of the chair backrest 15, for movement of the support arm 17 and upper garment hanger 19 thereon between a first inner stowed position (as shown in full line in figures 6 and 8), and a second
25 outwardly inclined projecting position ready for use, and vice-versa. The pivot connection 18 can be simply a transverse tubular sleeve 18b fixedly secured (eg by welding to the lower end of the support arm 17) located about a bolt shank or pivot pin (defining the
30 pivot axis 18a) secured to and extending between the mounting flange parts 16; and a limiting stop member 20 is secured to and projects inwardly below the sleeve 18b to abut the mounting plate 13a and limit the outward pivoting movement of the support arm 17. The base
35 mounting 13 may include a detachable cover part 21 to conceal the mounting plate 13a, flanges 16, pivot connection 18 and limiting stop 20; and such cover part 21, which has an upper squared clearance aperture

21a through which the support arm 17 projects, may be securable in position by having its upper inner edge part 21b arranged for hooked engagement over upper projections 13b of the mounting plate 13a and a base wall 13c which locates under a base projection or flange 13c of the mounting 13 for securement thereto, such as by screws or a snap-fit arrangement. Other base mounting 13 and concealing cover/housing arrangements can of course be employed.

10

Means are preferably provided to normally retain the support arm 17 and hanger 19 in the inner stowed position adjacent the rear face of the chair backrest 15, when not required for garment support; and in one arrangement, with the support arms 17 being constructed from steel, a magnet 22 is fixedly mounted on the upper rear face part of the mounting plate 13a and against which the support arm 17 can abut (for detachable retention thereby) when in the inner pivoted position. Spring catch or other releasable retaining means can alternatively be employed, or it is envisaged that the support arm 17 can be spring biased towards the inner stowed position and held in the outer position only when the hanger 19 thereof is supporting a jacket or like garment the weight of the garment overcoming the spring bias.

In the illustrated form of figure 6, the hanger 19 is of simple curved tube form, and may be curved inwardly to conform with a curved chair backrest 15 as well as downward either side of the support arm 17 in typical simple garment hanger form; but of course a more particularly shaped hanger 19 with a medial shaped neck support part can be provided (eg in the manner similar to that described with reference to figures 1 to 4. Likewise a simpler form of hanger or garment support part can be employed in the earlier described recessed fitting arrangement.

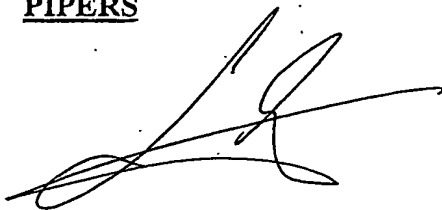
Preferably, the hanger 19 is arranged to be elevated relative to the chair backrest 15 when the unit 12 is in use for garment support, with the support arm 17 pivoted outwardly about its pivot connection 18; and the support arm 17 can be of two part telescopic construction with releasable catch or latch means to hold the support arm 17 in the extended position. In the illustrated form the support arm 17 is of flattened tubular steel construction with a first smaller cross section inner lower part 17a secured to and extending upwardly from the pivot connection 18, and a larger cross section upper and outer part 17b which is of complementary cross sectional shape to the inner lower part 17a so as to be slidably located thereover for upward extension and downward retraction relative thereto. The garment hanger 19 is mounted on the upper end of the outer part 17b; and the releasable catch means comprises an outwardly spring biased button 23 located as a close sliding fit within an aperture 24 in an upper part of the rear outer wall of the support arm lower part 17a, with an inner compression spring 25 providing the outward spring bias. The lower end part of the rear wall of the support arm upper and outer part 17b is provided with a smaller aperture 26 alignable with the button 23 and within which a rounded (or bevel edged) projecting portion 23a of the button can locate under the spring bias when the support arm 17 is extended and to thus hold the support arm 17 in the extended position. For retraction and stowing of the support arm 17 when the unit 12 is not required to support a garment, inward thumb pressure on the button projection 23a against the spring bias will release such projection 23a from its engagement in aperture 26 to enable the support arm outer part 17b to be slid downwardly over and relative to the support arm lower part 17a. Other releasable catch means can of course be employed.

Some preferred aspects of the invention have been described and illustrated by way of example, but it will be appreciated that other variations of and modifications to the invention can take place without departing therefrom.

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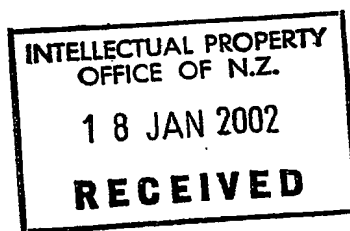
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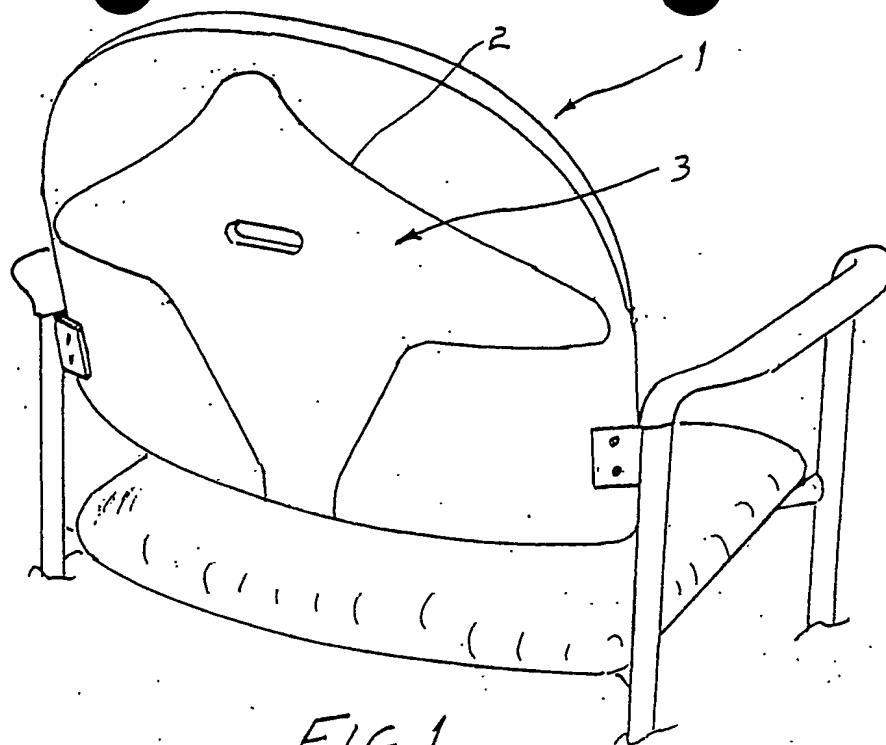


FIG. 1

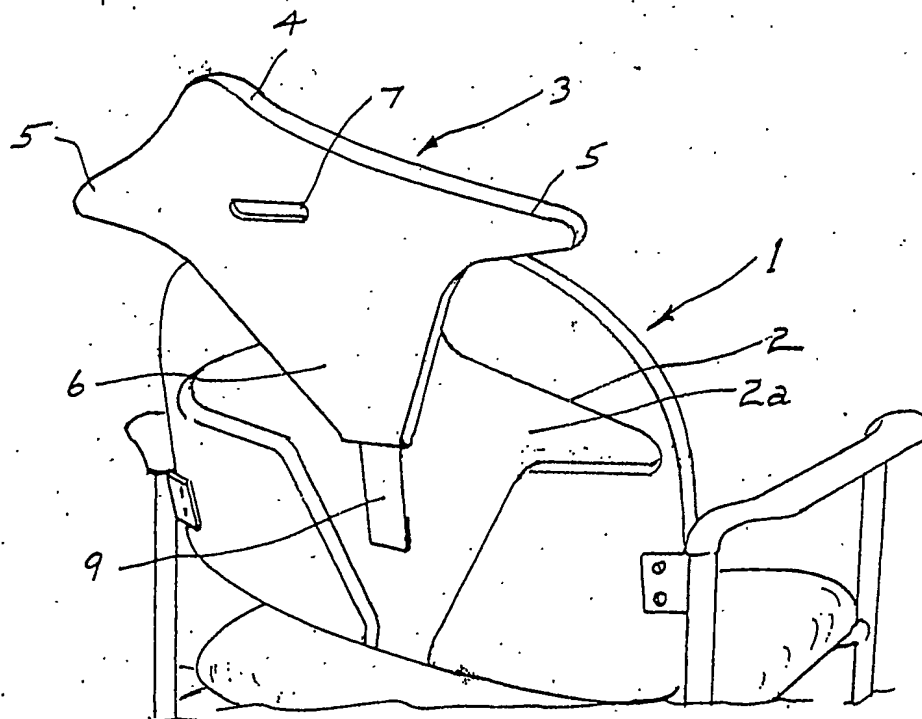


FIG. 2

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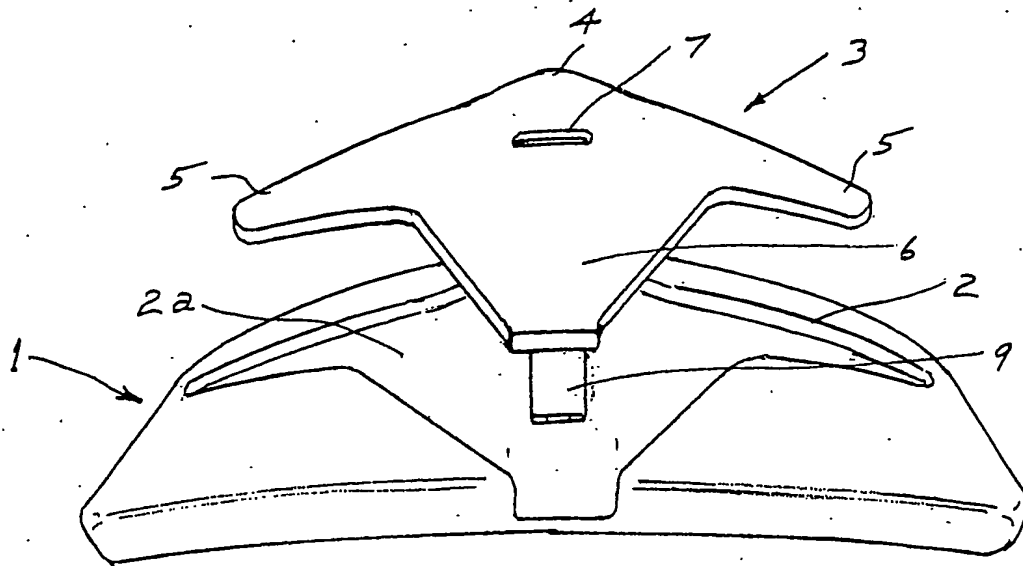


FIG. 4

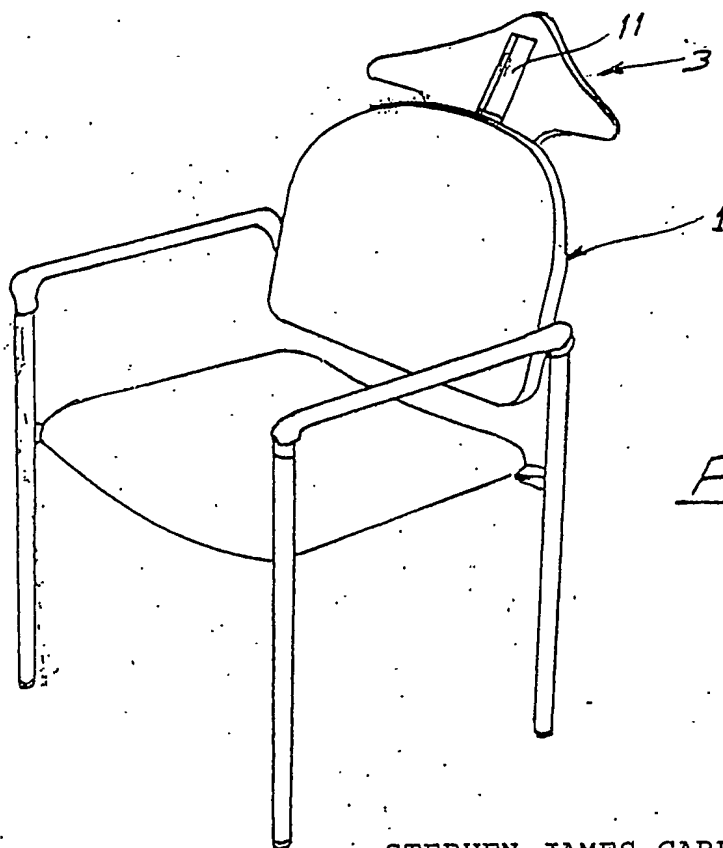


FIG. 3

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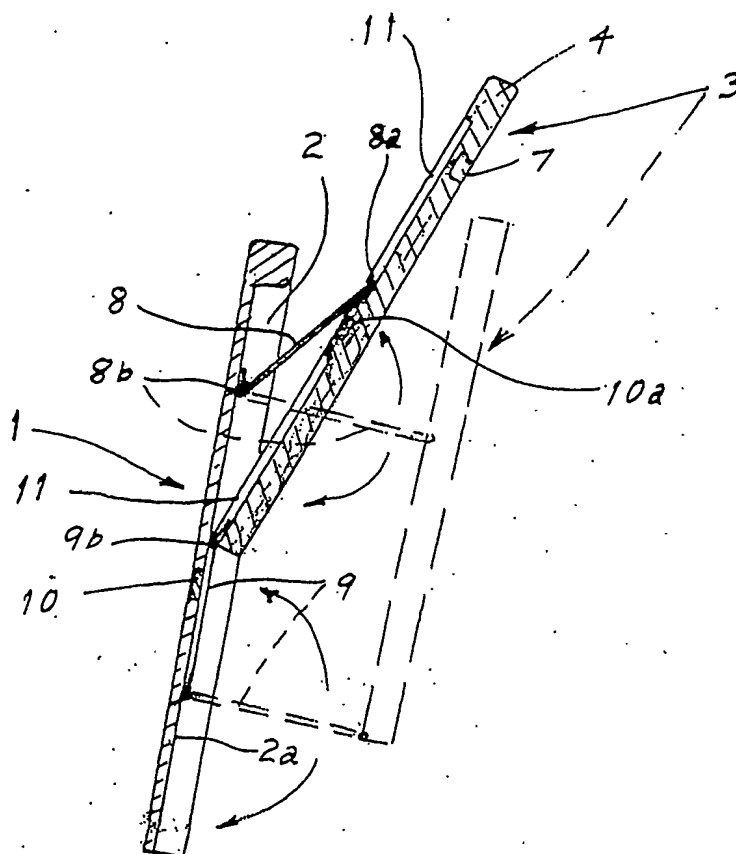
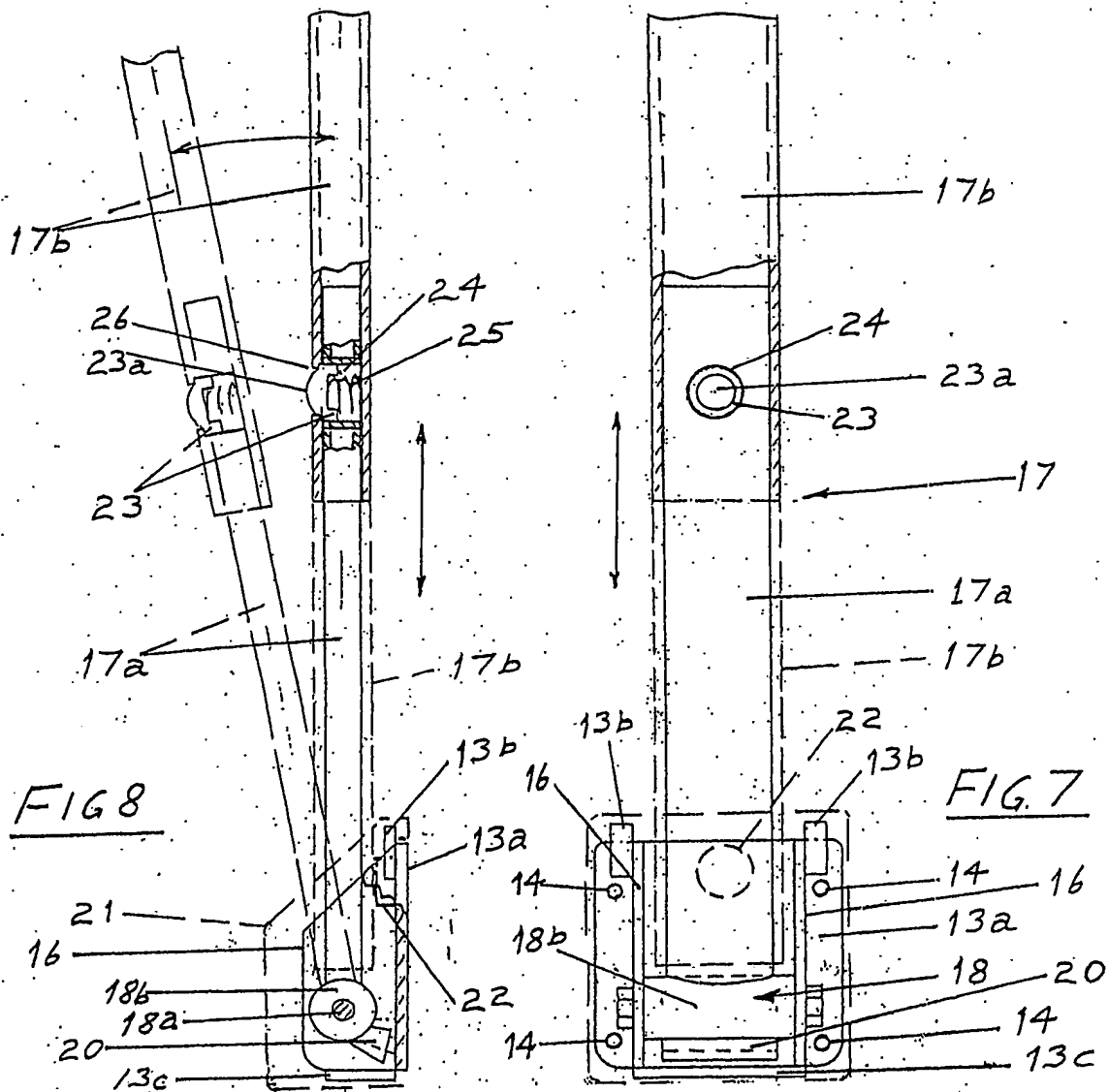
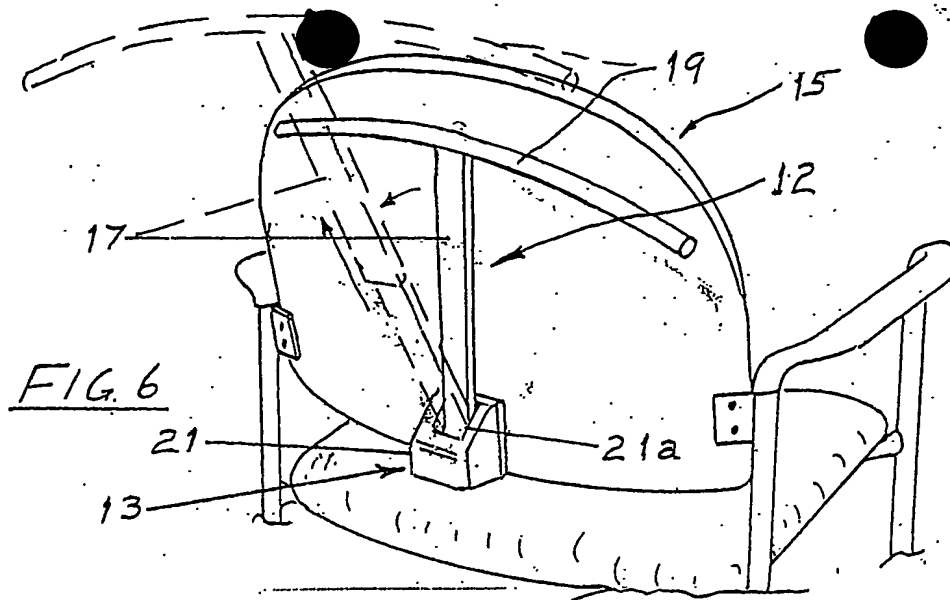


FIG. 5

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